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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,221	10/08/2003	Tatsuro Yamazaki	021910.000093	4174

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/680,221	Applicant(s) YAMAZAKI ET AL.	
	Examiner Regina Liang	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10, 12, 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/30/06</u> | 6) ☐ Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to amendment filed 11/2/06. Claims 1-4, 6-10, 12, 13 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1, 2, 6, 12, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuo (US 5,742,270).

As to claims 1, 13, Fig. 2 of Kuo discloses an image display apparatus, comprising a plurality of display device, a plurality of scan lines (VG(1)-VG(N)) and a plurality of modulation lines (signal lines VD(1)-VD(M)), a scanning circuit (35) for applying scanning signals to the scanning lines, a modulation circuit (36) for applying a modulation signal to the modulation lines. Fig. 6A of Kuo teaches the scanning circuit applies scanning signals to a group of scanning lines in one select period (VG(1), VG(2)), and applies the scanning signals in a subsequent select period, to the plurality of scanning lines which were shifted with one scan line from the group of scanning lines to which the scanning signals were applied in a pervious select period (VG(3), VG(4)), and applies the scanning signals which have the same polarity to the modulation signal in successive two select periods, to the scanning line to which the scanning signals should be applied repeatedly. Fig. 6A of Kuo also discloses the output from the scanning circuit has a portion in which signal level is controlled to a non-selection electrode potential level

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(non selected voltage 62) between the scanning signals which are applied repeatedly to the scanning line, and the scanning circuit is configured to apply scanning signals with different electric potentials (selected voltage 60 and non-selected voltage 62) to a plurality of scan lines which are selected in one select period.

As to claim 2, Kuo teaches a display device having different scanning conditions (different scanning methods, see Figs. 5-7), in a first scanning condition, the scanning signals are applied in a successive select period to a predetermined number of scanning lines which were shifted with one scanning lines from the a plurality of scanning lines to which the scanning signals were applied in a previous select period (Figs. 7A, 7B); in a second scanning condition the number of scanning lines to which the scanning signals are applied simultaneously in one select period or both of the number of scan lines to which the scanning signals are applied repeatedly in successive two select period and the number of scan lines to which the scanning signals are applied simultaneously in one select period are different from that of the first condition (Figs. 6A, 6B).

As to claim 6, Fig. 6A of Kuo teaches a scanning signal having the highest level (60) in each of successive select periods to a different scanning line.

As to claim 12, Fig. 2 of Kuo teaches potential difference between the scanning signal and data signal.

Claim Rejections - 35 USC § 103

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murade (US 6,831,633) in view of Kuo.

As to claim 10, Fig. 2 of Murade discloses an image display apparatus comprising: a plurality of display device; a plurality of scan lines (Y1-Y720) and a plurality of modulation lines (35), which configures a matrix interconnection for driving the plurality of display devices; a scanning circuit (104) for outputting scanning signals sequentially with scanning the plurality of scan lines; a control circuit (200 in Fig. 1) for controlling the scanning circuit in accordance with one scanning condition out of a plurality of scanning conditions which are different from each other (the plurality of scanning conditions are shown in Figs. 5-12), as to the number of scanning lines which are selected simultaneously in each select periods (see Figs. 7 and 8), a modulation circuit for applying a modulation signal to the modulation lines; and a plurality of signal input terminals to which signals are inputted, respectively; wherein the control circuit controls the scanning circuit by a scanning condition, which responded to the signal input terminal from which video signals to be displayed are inputted, which was selected out of a plurality of scanning conditions (col. 1, lines 63 to col. 2, lines 8, col. 11, lines 46-54, col. 12, lines 46-56 for example).

Murade does not disclose one of scanning conditions comprising number of scan lines to which the scanning signals are applied repeatedly in successive two select periods, or both of the number of the scan lines which are selected simultaneously in each select period and the number of the scan lines to which the scanning signals are applied repeatedly in successive two select periods.

However, Fig. 6A of Kuo teaches a display device having a plurality of scanning conditions, one of the scanning conditions comprising number of scan lines to which the scanning signals are applied repeatedly in successive two select periods, or both of the number of

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the can lines which are selected simultaneously in each select period and the number of the scan lines to which the scanning signals are applied repeatedly in successive two select periods. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device of Murade to have the scanning condition as taught by Kuo so that the brightness difference in pixels caused by cell capacitance is eliminated and so as to increase the duty ratio and the charge time of thin film transistors (col. 2, lines 37-42 of Kuo).

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo in view of Murade.

As to claim 4, Kuo does not disclose the control circuit changing the scanning conditions based on the input signal from a signal input terminal. However, Fig. 1 of Murade teaches a display device having a control circuit (200) changing the scanning conditions based on the input signal from a signal input terminal (Vin). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display device of Kuo to have the teachings as taught by Murade as a result this prevents the scanning signals from overlapping each other in the active periods thereof, thereby improving image quality (col. 4, lines 19-22 of Murade).

As to claim 3, Murade teaches changing the scanning conditions based on the video input signal from an input terminal (Vin), it is inherent Murade changing scanning conditions is during a period after one screen was displayed until a next screen is displayed.

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6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo in view Someya et al (US 6,924,796 hereinafter Someya).

As to claim 7, Kuo does not disclose the display apparatus comprising a correction circuit for emphasizing an edge of an image which is displayed. However, Someya teaches a display device comprising a correction circuit (4-6 in Fig. 6) for correcting the dot clock frequency of the input signal and for emphasizing an edge of an image which is displayed (col. 4, line 66 to col. 5, line 6, col. 5, lines 54-66). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display apparatus of Kuo to have a correction circuit as taught by Someya for providing edge enhancement and improving the displayed image quality.

As to claim 8, Someya teaches the correction circuit is configured to select level of correction (col. 6, lines 1-55).

Allowable Subject Matter

7. Claim 9 is allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 1-4, 6-8, 10, 12, 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

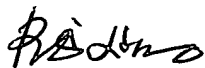
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Regina Liang
Primary Examiner
Art Unit 2674

12/29/06